

PROJECT DESCRIPTION

1. GENERAL

THIS PROJECT INVOLVES THE RECONSTRUCTION OF THE EXISTING TRAFFIC SIGNAL AT THE INTERSECTION OF MD 45 (YORK ROAD) AND AIGBURTH ROAD IN BALTIMORE COUNTY.

MD 45 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

II. INTERSECTION OPERATION

THE INTERSECTION SHALL OPERATE IN A NEMA 4-PHASE, FULLY-ACTUATED MODE. THE MD 45 APPROACHES SHALL OPERATE CONCURRENTLY WITH A LAGGING EXCLUSIVE/PERMISSIVE LEFT-TURN PHASE FOR THE SOUTHBOUND APPROACH. THE AIGBURTH ROAD APPROACH SHALL OPERATE INDEPENDENTLY. EXISTING PEDESTRIAN MOVEMENTS SHALL BE UPGRADED WITH INSTALLATION OF AUDIBLE PEDESTRIAN PUSHBUTTONS AND LED COUNTDOWN PEDESTRIAN SIGNALS ON THE NORTH AND EAST LEGS. TRAFFIC DETECTION SHALL BE ACHIEVED USING VIDEO DETECTION CAMERAS.

THE AUDIBLE PUSHBUTTONS WILL FUNCTION AS FOLLOWS:

1. WHEN A PEDESTRIAN LOCATES AND PRESSES THE PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT MESSAGE WILL ANNOUNCE THE FOLLOWING MESSAGE:

NORTH LEG: "Wait to cross York at Aigburth. Wait."
EAST LEG: "Wait to cross Aigburth at York. Wait."

2. WHEN THE "WALK" PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE "WALK" PHASE.

III. SPECIAL NOTES

1. THE CONTRACTOR SHALL PURCHASE AND DELIVER THE AUDIO PUSHBUTTON AND 2-WIRE CENTRAL CONTROL UNIT FOR THE CONTROLLER CABINET TO THE SHA SIGNAL SHOP FOR INSTALLATION AND PROGRAMMING. THE CONTRACTOR SHALL CONTACT MR. EDWARD RODENHIZER, CHIEF, SIGNAL SHOP, AT 410-787-7652 THREE (3) DAYS PRIOR TO THE DELIVERY OF THE EQUIPMENT.
2. MAINTENANCE OF TRAFFIC WILL BE PERFORMED BY THE CONTRACTOR UTILIZING THE STANDARD PLATES FOR TRAFFIC CONTROL FROM SECTION MD 104.00 OF THE SHA BOOK OF STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES.
3. THE CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS AT ALL TIMES.

PROJECT CONTACTS

1. THE FOLLOWING ARE THE CONTACT PERSONS FOR THE PROJECT:

MS. ERIN KUHN, ASSISTANT DISTRICT ENGINEER - TRAFFIC
PHONE: (410) 229-2381

MR. JESSE FREE, ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
PHONE: (410) 229-2421

MR. ANDRE FUTRELL, ASSISTANT DISTRICT ENGINEER - MAINTENANCE
PHONE: (410) 229-2361

MR. MICHAEL PASQUARIELLO, UTILITY ENGINEER
PHONE: (410) 229-2341

MR. NEIL HAINES, CONSTRUCTION INSPECTION
PHONE: (443) 572-5233

MS. CORREN JOHNSON, DIVISION CHIEF - TRAFFIC OPERATIONS, OOTS
PHONE: (410) 787-7630

MR. EDWARD RODENHIZER, CHIEF - SIGNAL SHOP
PHONE: (410) 787-7652

MR. EUGENE BAILEY, CHIEF - SIGN SHOP
PHONE: (410) 787-7676

MR. MIKE STOCKER, SUPPLY OFFICE (SIGNAL SHOP WAREHOUSE)
PHONE: (410) 787-7668

POWER COMPANY REPRESENTATIVE:
BALTIMORE GAS AND ELECTRIC
1068 FRONT STREET
BALTIMORE, MARYLAND 21202
410-637-0713

EQUIPMENT LIST 'C'

- C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

EQUIPMENT LIST 'A'

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

ITEM	QUANTITY	DESCRIPTION
9000	1 EA	CONTROLLER CABINET, SIZE "S" WITH CONTROLLER
9086	1 EA	VIDEO DETECTION INTERFACE UNIT 1-4 CAMERAS
		FLAT SHEET ALUMINUM SIGNS CONSISTING OF:
9570	59 SF	GROUND-MOUNTED: 4 EA S1-1 (30" X 30") 2 EA W16-7P(L) (12" X 24") 2 EA W16-7P(R) (12" X 24") 1 EA M1-5(6) "NORTH, MARYLAND 45, RIGHT ARROW" (36" X 72") 1 EA M1-5(6) "SOUTH, MARYLAND 45, LEFT ARROW" (24" X 48")

9571	14.5 SF	MAST ARM/POLE-MOUNTED: 1 EA D-3(1) "YORK RD" (VAR. X 16") MAST ARM MOUNT 1 EA R10-11b "NO TURN ON RED" (24"X24") MAST ARM MOUNT 2 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS AIGBURTH ROAD" (9" X 15") 2 EA R10-3(1) COUNTDOWN PEDESTRIAN PUSHBUTTON SIGN "TO CROSS YORK ROAD" (9" X 15")
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EQUIPMENT LIST 'B'

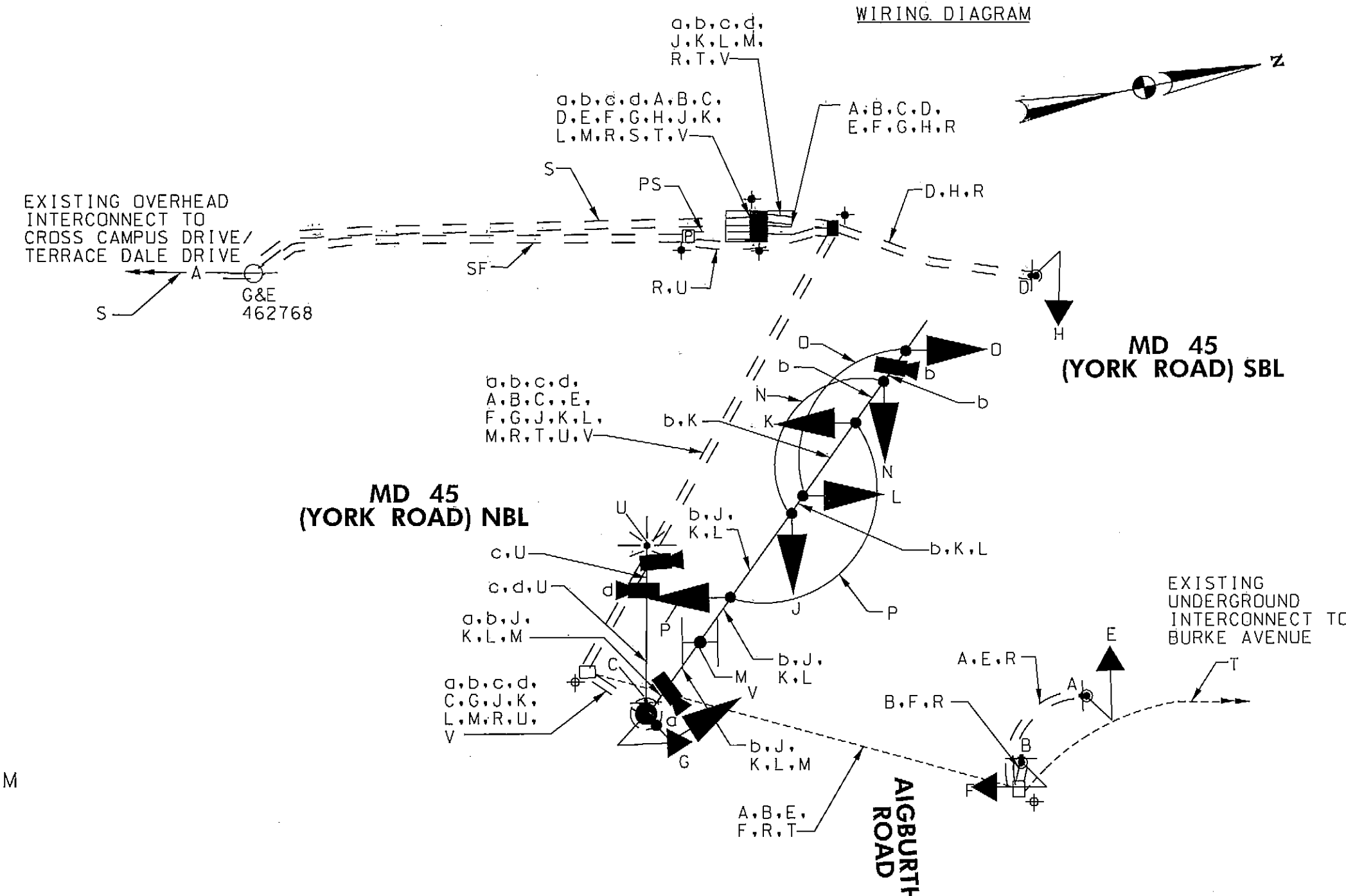
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM	QUANTITY	DESCRIPTION
1001	1 EA	MAINTENANCE OF TRAFFIC
2002	2 CY	TEST PIT EXCAVATION
5004	540 LF	12" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
5005	70 LF	24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING LINES
6002	600 SF	5" CONCRETE SIDEWALK
6003	35 SF	DETECTABLE WARNING SURFACE FOR RAMP (TYPE 3 BRICK PAVERS)
8000	11.8 SF	RELOCATE EXISTING GROUND-MOUNTED SIGNS
8000	1 EA	RELOCATE EXISTING ILLUMINATED SIGN FROM EXISTING SIGNAL MAST ARM
8001	22 EA	12" LED SIGNAL HEAD SECTION
8002	1 EA	2-WIRE CENTRAL CONTROL UNIT
8004	3 EA	8" LED SIGNAL HEAD SECTION
8008	4 EA	AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON
8009	3 EA	BREAKAWAY PEDESTAL POLE (ANY SIZE)
8012	1 EA	100 AMP EMBEDDED METERED SERVICE PEDESTAL WITH BYPASS SWITCH
8014	1 EA	INSTALL CONTROLLER AND CABINET, BASE-MOUNTED
8016	4 EA	16" LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
8020	1 EA	MAST ARM POLE AND 60' MAST ARM ANY 'T' DIMENSION
8024	1 EA	REMOVE AND DISPOSE OF MATERIAL AND EQUIPMENT (PER ASSIGNMENT)
8029	4 EA	VIDEO DETECTION CAMERA AND CABLE, ANY LENGTH
8034	140 LF	DISCONNECT, PULL BACK AND RE-ROUTE EXISTING CABLES
8038	50 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - BORED
8040	240 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED
8041	131 LF	WOOD SIGN SUPPORTS UP TO 4" X 6"
8042	73.5 SF	INSTALL OVERHEAD OR GROUND-MOUNTED SIGNS INCLUDING ALL HARDWARE
8044	220 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8047	60 LF	ELECTRICAL CABLE, 1-CONDUCTOR NO. 8 AWG - THHN/THWN
8048	1 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8055	500 LF	ELECTRICAL CABLE, 2-CONDUCTOR NO. 14 AWG
8057	750 LF	ELECTRICAL CABLE, 5-CONDUCTOR NO. 14 AWG
8058	700 LF	ELECTRICAL CABLE, 7-CONDUCTOR NO. 14 AWG
8068A	1 EA	ANY SIZE LIGHTING ARM ON SIGNAL POLE WITH LED LAMP AND LUMINAIRE

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)	(R) (Y) (B)
Phase 2 & 6	G	G	G	G	G	R	R	WK	WK	DW	DW
Ped. Clear	G	G	G	G	G	R	R	FL/DW	FL/DW	DW	DW
2 & 6 Change	Y	Y	G	G	G	R	R	DW	DW	DW	DW
Phase 2 & 5	R	R	G	G/G	G/G	R	R	DW	DW	DW	DW
5 Change	R	R	Y	Y/Y	Y/Y	R	R	DW	DW	DW	DW
Phase 4	R	R	R	R	R	G	G	DW	DW	DW	DW
4 Change	R	R	R	R	R	Y	Y	DW	DW	DW	DW
Phase 4 ALT	R	R	R	R	R	G	G	DW	DW	WK	WK
Ped. Clear	R	R	R	R	R	G	G	DW	DW	FL/DW	FL/DW
4 ALT Change	R	R	R	R	R	Y	Y	DW	DW	DW	DW
Flashing Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	DARK	DARK	DARK	DARK

WIRING DIAGRAM



WIRING LEGEND

a, b, c, d	- 3 CONDUCTOR NO. 18 AWG VIDEO CABLE
A, B, C, D	- 2 CONDUCTOR NO. 14 AWG ELEC. CABLE
E, F, G, H	- 5 CONDUCTOR NO. 14 AWG ELEC. CABLE
J, K, L, V	- 7 CONDUCTOR NO. 14 AWG ELEC. CABLE
M	- 5 CONDUCTOR NO. 14 AWG ELEC. CABLE (ILLUMINATED SIGN)
N, O, P	- 5 CONDUCTOR NO. 14 AWG ELEC. CABLE (JUMPER)
R	- NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
S, T	- EXISTING INTERCONNECT CABLE (TO BE PULLED BACK AND RE-ROUTED TO NEW CONTROLLER)
U	- 3 CONDUCTOR NO. 12 AWG (B.W.G.) TYPE T/C
PS	- 1 CONDUCTOR NO. 8 AWG-THHN/THWN ELEC. CABLE (METERED SERVICE)
SF	- PROPOSED SERVICE FEED
+	- GROUND ROD (3/4" DIA. X 10' LENGTH)
⊕	- EXISTING GROUND ROD

TOD NO: XY125-06
SHA NO: BA087851
MD 45 @ Aigburth Road

MM CENTURY
ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

REVISION 'E' CEI PROJECT NO. 101195.90

PLOTTED: Thursday, May 23, 2013 AT 04:08 PM
FILE: \\winhite\h\Projects\Transportation\101195.90 - MD 45 (York Road) at Aigburth Road\CADD\ACAD Sheet\ses\p602_MD45atAigburth.dgn

SHA

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD 45 (YORK ROAD) AT AIGBURTH ROAD
TOWSON, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE ADVERTISED DATE MAY 23, 2013 CONTRACT NO. XY1255185

DESIGNED BY ENBMFP III COUNTY BALTIMORE
DRAWN BY ENBMFP III LOGMILE 03004501.50
CHECKED BY NMR TMS NO. L394
F.A.P. NO. TOD NO.

TS. NO. 159E DRAWING SG-02 OF 2 SHEET NO. 2 OF 2